

Title (en)

RESONATOR FIBER-OPTIC GYRO WITH QUADRATURE ERROR REDUCER

Title (de)

FASEROPTISCHER RESONATORKREISEL MIT QUADRATURFEHLERREDUZIERER

Title (fr)

GYROSCOPE À FIBRES OPTIQUES DE RÉSONATEUR À RÉDUCTEUR D'ERREURS DE QUADRATURE

Publication

EP 3605020 B1 20210210 (EN)

Application

EP 19177541 A 20190530

Priority

US 201816052024 A 20180801

Abstract (en)

[origin: EP3605020A1] A resonance fiber-optic gyro (RFOG) with quadrature error reducer is provided. The RFOG with quadrature error reducer includes a laser assembly, a fiber resonator assembly, a resonance tracking loop and a quadrature error reducer circuit. The resonance tracking loop, coupled to an output of the fiber resonator assembly, is used to generate a resonance frequency signal that is coupled to an OPLL mixer in one of a CCW OPLL or the CW OPLL of the laser assembly. The quadrature error reducer circuit includes an amplitude control loop and a second harmonic phase control loop. The amplitude control loop is used to generate a common modulation signal. An output of the amplitude control loop is coupled to a common phase modulator in the laser assembly. The second harmonic phase control loop is used to selectively adjust a phase of a second harmonic modulation signal in the amplitude control loop at startup.

IPC 8 full level

G01C 19/72 (2006.01)

CPC (source: EP US)

G01C 19/721 (2013.01 - EP US); **G01C 19/726** (2013.01 - EP); **G01C 19/727** (2013.01 - US); **H03D 7/165** (2013.01 - US); **H04L 27/3863** (2013.01 - US)

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